

1 ABSTRACT

2 An optical switch array assembly for DNA probe light synthesis and hybridized
3 DNA probe light detection is composed of a silicon substrate, an optical switch
4 array disposed in the substrate, a glass plate mounted on the top of the substrate,
5 and a DNA probe array disposed on the surface of the glass plate. The substrate
6 also contains a driving circuit for forcing each optical switch on and off and an
7 addressing circuit for locating each optical switch. A plurality of holes is disposed in
8 the substrate so that each hole is aligned with an optical switch and guides a light
9 beam to a corresponding optical switch.

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